bryant

HEATING & COOLING SUBMITTAL
Dura*Pac* Series
Unit 580F036-150
3 to 12$^{1}/_{2}$ NOMINAL TONS
COMMERCIAL SINGLE-PACKAGE ROOFTOP GAS HEATING/ ELECTRIC COOLING UNITS

580F units are a single piece, gas heating/electric cooling unit, with a low profile, pre-wired, tested and charged at the factory. The units have the capability for convertible supply and return openings and are intended for installation on an accessory curb (ordered separately), or for slab mounting (for horizontal duct connections). Units are designed to accept a field-installed economizer, enthalpy control, manual or 2-position outside air damper, roof curb, as well as up to 3 choices of gas heat. Refer to accessory chart for full listing.

FEATURES

- Standard one-year full product warranty.
- Five-year protection plan for the motor-compressor.
- Five-year protection plan on heat exchangers.
- Outdoor ambient cooling operation from 25 F (–4 C) to 115 F (46 C).
- Units are tested and certified by ARI and certified by UL and CSA. Factory-run test printout included in each rooftop.
- 24-volt control circuit, with resettable breaker.
- Two-inch disposable-type return air filters in dedicated rack.
- Hermetic compressor on independent circuit with internal line break and overload protection, self-lubricating with internal discharge muffler.
- Refrigeration circuit contains a filter drier to trap dirt and particles.
- Two-speed direct-drive evaporator fan on sizes 036-060. All other sizes are belt driven. Adjustable belt-drive fans are optional on 036-060 sizes.
- Non-corrosive condensate pan with self-draining design with both bottom and side drain connections.
- Thru-the-bottom power, control and gas entry capability.
- Indoor and outdoor coils constructed of aluminum fins mechanically bonded to seamless copper tubes.
- Single point electrical and gas connections.
- Direct-drive propeller condenser fan totally enclosed with permanently lubricated bearings.
- Pre-painted, insulated cabinet with primed inner panels, certified 500-hr salt spray test and non-corrosive screws.
- Large, easily removable panels provide ready access to unit components for rapid removal or maintenance.

SUBMITTAL DATA

Job Name _____

Architect _____

Engineer _____

Contractor _____

Unit Designation _____

PERFORMANCE DATA

Cooling

Net Total Cap. _____ Btuh

Net Sensible Cap. _____ Btuh

Compressor Power Input _____ kW

_____ F Outdoor Air Temp.

Indoor Entering Air db_____ F wb _____ F

CFM_____ Ext. Static Pressure ____ (in. wg)

Fan RPM _____ Bhp

SEER/EER_____

Heating

Input: Stage 1 _____ Total _____ Btuh

Output: Stage 1 _____ Total _____ Btuh

AFUE _____ %

Steady State _____ %

Operating Weight _____ lbs. (unit) _____ lbs. (curb)

ELECTRICAL DATA

Power Supply to Unit _____ Volts _____ Phase _____ Hz

Minimum Circuit Amps _____

Maximum Overcurrent Protection (Fuse Only) _____

- Filter access door for filter access and maintenance that requires no tools.
- Induced draft (negative pressure) combustion system with Hall effect sensor to detect proper operation of induced-draft motor.
- 3 to 6-ton units have one stage of cooling and $7^1/_2$ to $12^1/_2$-ton units have two stages of cooling. Units will have either one stage or two stages of gas heating depending on unit size, voltage, and heating capacity.
- Heavy Alumagard™ coated heat exchangers, with aluminized steel burners.
- Heating controls with direct spark ignition and redundant gas valve. Fan switch, high temperature limit switch and flame rollout switch standard.
- Fixed orifice metering device precisely controls refrigerant flow to each circuit individually.
- Reliable accurate control circuit with color coded wires and easily accessible terminal board.
- Integrated gas control board with built-in diagnostics to determine error codes and control indoor fan on/off delays.
- Integrated gas control board provides anti-cycle protection for gas heat operation.
- Loss of charge (low pressure), freeze protection, and high pressure switches standard.

FACTORY-INSTALLED OPTIONS

- ☐ EconoMi$er — Fully Modulating, Gear Driven
- ☐ Copper/Copper Coils — Evaporator, Condenser, Both
- ☐ Pre-Coated Condenser Coil
- ☐ E-Coat (Post-Coated) Condenser Coil
- ☐ Unit-Mounted Non-Fused Disconnect Switch
- ☐ 115-Volt Convenience Outlet
- ☐ Alternate Motor and Drive (except 072 and 102 size)
- ☐ High-Static Motor (except 150 size)
- ☐ 25% Manual Air Damper

FIELD-INSTALLED ACCESSORIES

- ☐ EconoMi$er — Fully Modulating, Gear Driven
- ☐ EconoMi$er with 4 to 20 mA Actuator — Fully Modulating, Gear Driven
- ☐ Power Exhaust for EconoMi$er
- ☐ EconoMi$er/Power Exhaust
- ☐ 25% Open Two-Position Damper
- ☐ 25% Open Manual Air Damper
- ☐ 100% Open Two-Position Damper
- ☐ Durablade Economizer
- ☐ Solid-State Enthalpy Control
- ☐ Differential Enthalpy Control
- ☐ Roof Curb (14- or 24-in. Height)
- ☐ Thru-the-Bottom/Roof Curb Electrical and Gas Connection Kit
- ☐ Time Guard® II Compressor Anti-Cycle Control
- ☐ Condenser Coil Hail Guard
- ☐ Condenser Coil Protector
- ☐ –20 F Motormaster® Low Ambient Control Kit
- ☐ Programmable Set-Back Thermostat
- ☐ Liquid Propane (LP) Gas Kit
- ☐ Flue Hood Protector Kit
- ☐ Flue Discharge Deflector
- ☐ Indoor Fan/Filter Status Indicator
- ☐ Other _____

CUT ALONG DOTTED LINE CUT ALONG DOTTED LINE

CERTIFIED DIMENSION PRINT

UNITED TECHNOLOGIES CARRIER — P O BOX 4808 SYRACUSE N. Y. 13221

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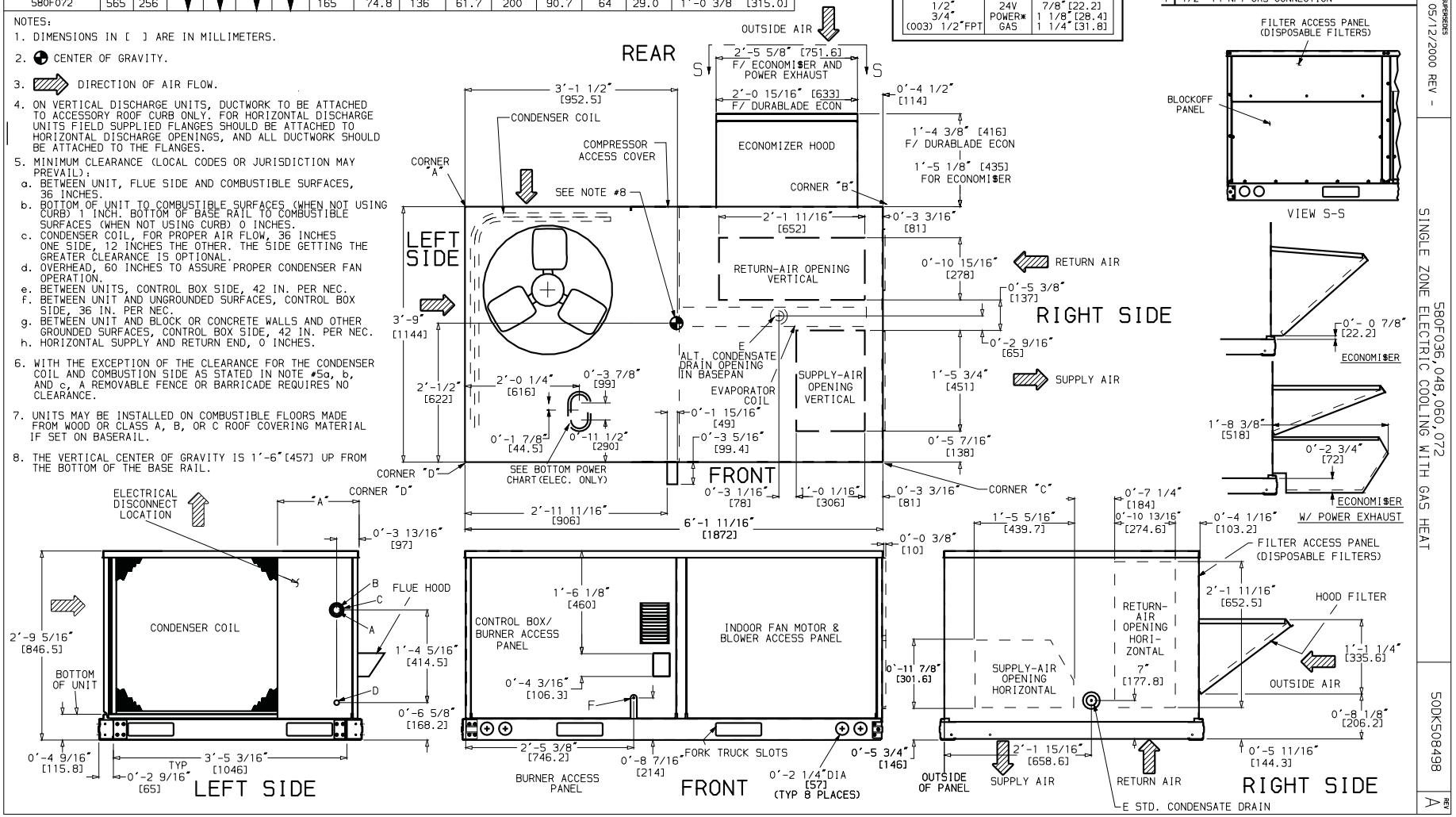
UNIT	STD. UNIT WEIGHT LBS.	STD. UNIT WEIGHT KG.	DURABLADE ECON WEIGHT LBS.	DURABLADE ECON WEIGHT KG.	ECONOMI$ER WEIGHT LBS.	ECONOMI$ER WEIGHT KG.	(A) CORNER WEIGHT LBS.	(A) CORNER WEIGHT KG.	(B) CORNER WEIGHT LBS.	(B) CORNER WEIGHT KG.	(C) CORNER WEIGHT LBS.	(C) CORNER WEIGHT KG.	(D) CORNER WEIGHT LBS.	(D) CORNER WEIGHT KG.	"A" PANEL LENGTH
580F036	460	209	34	15.4	47	21.3	140	63.5	105	47.6	159	72.1	56	25.4	1'-10 3/8" [568.0]
580F048	470	213	↓	↓	↓	↓	142	64.4	106	48.1	162	73.5	60	27.2	1'-10 3/8" [568.0]
580F060	490	222	↓	↓	↓	↓	150	68.0	115	52.2	160	72.6	65	29.5	1'-0 3/8" [315.0]
580F072	565	256	↓	↓	↓	↓	165	74.8	136	61.7	200	90.7	64	29.0	1'-0 3/8" [315.0]

BOTTOM POWER CHART:
THESE HOLES REQ'D FOR USE WITH ACCESSORY PACKAGES - CRBTMPWR001A00, 3A00 (1/2",3/4")

THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
1/2"	24V	7/8" [22.2]
3/4"	POWER*	1 1/8" [28.4]
(003) 1/2"FPT	GAS	1 1/4" [31.8]

	CONNECTION SIZES
A	1 3/8" DIA. [35] FIELD POWER SUPPLY HOLE
B	2" DIA. [51] POWER SUPPLY KNOCK-OUT
C	2 1/2" DIA. [64] POWER SUPPLY KNOCK-OUT
D	7/8" DIA. [22] FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	1/2"-14 NPT GAS CONNECTION

NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. ⊕ CENTER OF GRAVITY.
3. ⇨ DIRECTION OF AIR FLOW.
4. ON VERTICAL DISCHARGE UNITS, DUCTWORK TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. FOR HORIZONTAL DISCHARGE UNITS FIELD SUPPLIED FLANGES SHOULD BE ATTACHED TO HORIZONTAL DISCHARGE OPENINGS, AND ALL DUCTWORK SHOULD BE ATTACHED TO THE FLANGES.
5. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   a. BETWEEN UNIT, FLUE SIDE AND COMBUSTIBLE SURFACES, 36 INCHES.
   b. BOTTOM OF UNIT TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 1 INCH. BOTTOM OF BASE RAIL TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 0 INCHES.
   c. CONDENSER COIL, FOR PROPER AIR FLOW, 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   d. OVERHEAD, 60 INCHES TO ASSURE PROPER CONDENSER FAN OPERATION.
   e. BETWEEN UNITS, CONTROL BOX SIDE, 42 IN. PER NEC.
   f. BETWEEN UNIT AND UNGROUNDED SURFACES, CONTROL BOX SIDE, 36 IN. PER NEC.
   g. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, CONTROL BOX SIDE, 42 IN. PER NEC.
   h. HORIZONTAL SUPPLY AND RETURN END, 0 INCHES.
6. WITH THE EXCEPTION OF THE CLEARANCE FOR THE CONDENSER COIL AND COMBUSTION SIDE AS STATED IN NOTE #5a, b, AND c, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
7. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B, OR C ROOF COVERING MATERIAL IF SET ON BASERAIL.
8. THE VERTICAL CENTER OF GRAVITY IS 1'-6" [457] UP FROM THE BOTTOM OF THE BASE RAIL.



DATE 09/24/2001 | SUPERSEDES 05/12/2000 REV - | SINGLE ZONE ELECTRIC COOLING WITH GAS HEAT 580F036,048,060,072 | 50DK508498 | REV A

CERTIFIED DIMENSION PRINT

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P O BOX 4808 SYRACUSE N. Y. 13221

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580B036	530	240	34	15.4	47	21.3	127	57.6	122	55.3	138	62.6	143	64.9
580B048	540	245	↓	↓	↓	↓	129	58.5	124	56.2	141	64.0	146	66.2
580B060	560	254	↓	↓	↓	↓	134	60.8	129	58.5	146	66.2	151	68.5
580B072/580F073	615	279	↓	↓	↓	↓	147	66.7	142	64.4	160	72.6	166	75.3

NOTES:

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5. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
   a. BETWEEN UNIT, FLUE SIDE AND COMBUSTIBLE SURFACES, 48 INCHES.
   b. BOTTOM OF UNIT TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 1 INCH.
      BOTTOM OF BASE RAIL TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 0 INCHES.
   c. CONDENSER COIL, FOR PROPER AIR FLOW, 36 INCHES ONE SIDE, 12 INCHES THE OTHER. THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.
   d. OVERHEAD, 60 INCHES TO ASSURE PROPER CONDENSER FAN OPERATION.
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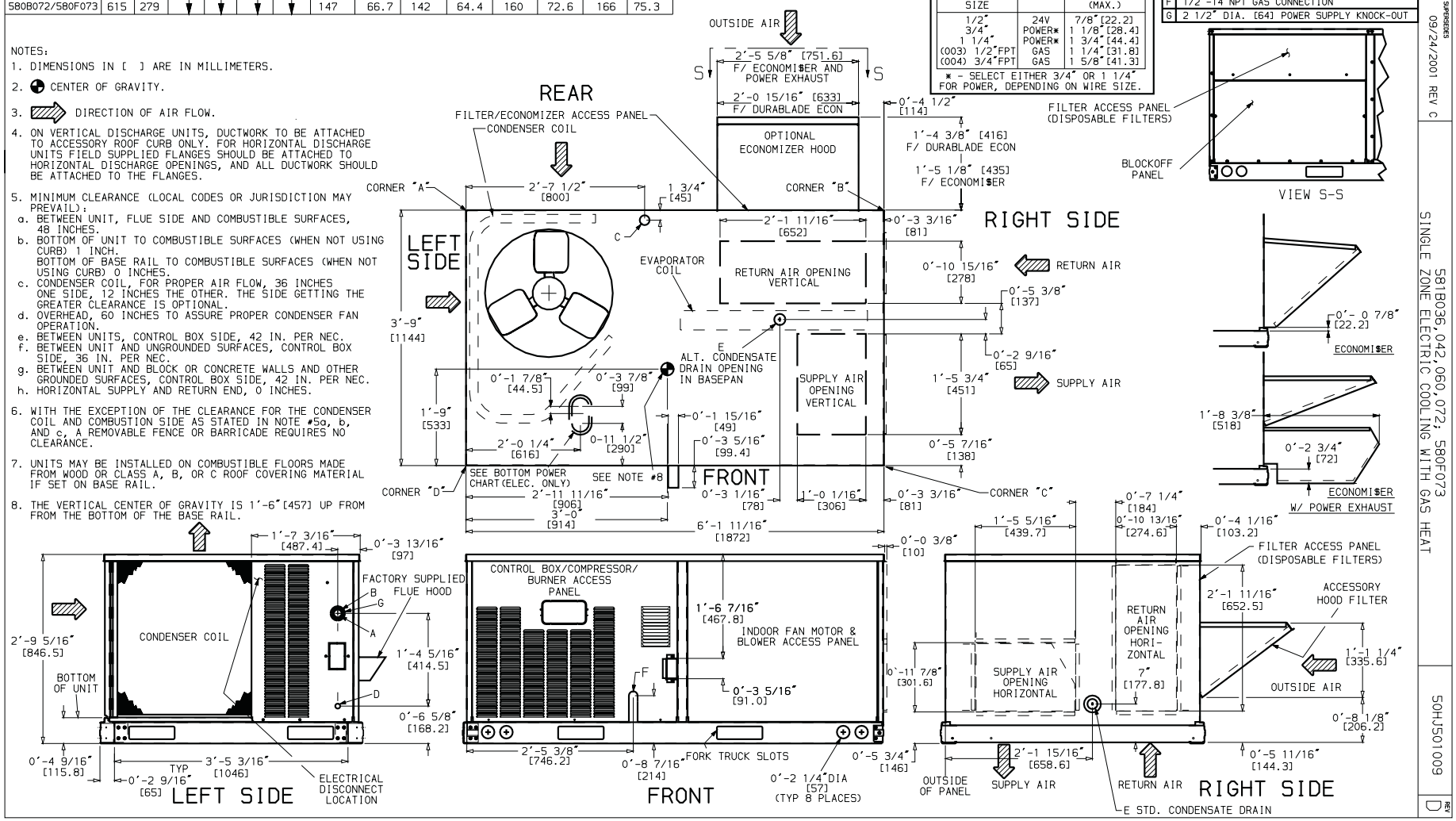
8. THE VERTICAL CENTER OF GRAVITY IS 1'-6" [457] UP FROM FROM THE BOTTOM OF THE BASE RAIL.

BOTTOM POWER CHART:
THESE HOLES REQ'D FOR USE WITH ACCESSORY PACKAGES - CRBTMPWR001A00, 3A00 (1/2",3/4") OR CRBTMPWR002A00, 4A00 (1/2",1-1/4")

THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
1/2"	24V	7/8" [22.2]
3/4"	POWER*	1 1/8" [28.4]
1 1/4"	POWER*	1 3/4" [44.4]
(003) 1/2"FPT	GAS	1 1/4" [31.8]
(004) 3/4"FPT	GAS	1 5/8" [41.3]

* - SELECT EITHER 3/4" OR 1 1/4" FOR POWER, DEPENDING ON WIRE SIZE.

	CONNECTION SIZES
A	1 3/8" DIA. [35] FIELD POWER SUPPLY HOLE
B	2" DIA. [51] POWER SUPPLY KNOCK-OUT
C	1 3/4" DIA. [44] CHARGING PORT HOLE
D	7/8" DIA. [22] FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	1/2"-14 NPT GAS CONNECTION
G	2 1/2" DIA. [64] POWER SUPPLY KNOCK-OUT



DATE 11/01/01
SUPERSEDES 09/24/2001 REV C
581B036,042,060,072; 580F073 SINGLE ZONE ELECTRIC COOLING WITH GAS HEAT
50HJ501009
REV D

CUT ALONG DOTTED LINE

CUT ALONG DOTTED LINE

CERTIFIED DIMENSION PRINT

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580F090	870	395	44	20	62	28	189	86	161	73	239	109	280	127	1'-2 7/8"	632	3'-5 5/16"	1050	2'-9 11/16"	856	2'-2 7/16"	672
580F102	880	399	↓	↓	↓	↓	191	87	163	74	242	110	284	129	3'-3 7/8"	1013	3'-5 5/16"	1050	2'-9 11/16"	856	2'-2 7/16"	672
580F120	1035	469					225	102	192	87	285	129	333	151	2'-5 7/8"	759	4'-1 5/16"	1253	3'-0 3/8"	924	2'-10 7/16"	875
580F150	1050	476					228	103	195	88	289	131	338	153	1'-2 7/8"	378	4'-1 5/16"	1253	3'-0 3/8"	924	2'-10 7/16"	875

NOTES:

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8. THE VERTICAL CENTER OF GRAVITY IS 1'-7" [483] FOR 090 AND 102, 1'-11" [584] FOR 120 AND 150 UP FROM THE BOTTOM OF THE BASE RAIL.

	CONNECTION SIZES
A	1 3/8" DIA. [35] FIELD POWER SUPPLY HOLE
B	2 1/2" DIA [64] POWER SUPPLY KNOCK-OUT
C	1 3/4" DIA [44] CHARGING PORT HOLE
D	7/8" DIA. [22] FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	1/2"-14 NPT GAS CONN. - 580F090 & 102 - 125 HEAT 3/4"-14 NPT GAS CONN. - 580F090 TO 120 - 180 HEAT 580F090 TO 150 - 224 HEAT;580F120 & 150 - 250 HEAT
G	2" DIA [51] POWER SUPPLY KNOCK-OUT

BOTTOM POWER CHART:
THESE HOLES REQ'D FOR USE WITH ACCESSORY PACKAGES - CRBTMPWR003A00 (1/2",3/4") OR CRBTMPWR002A00, 4A00 (1/2",1-1/4")

THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
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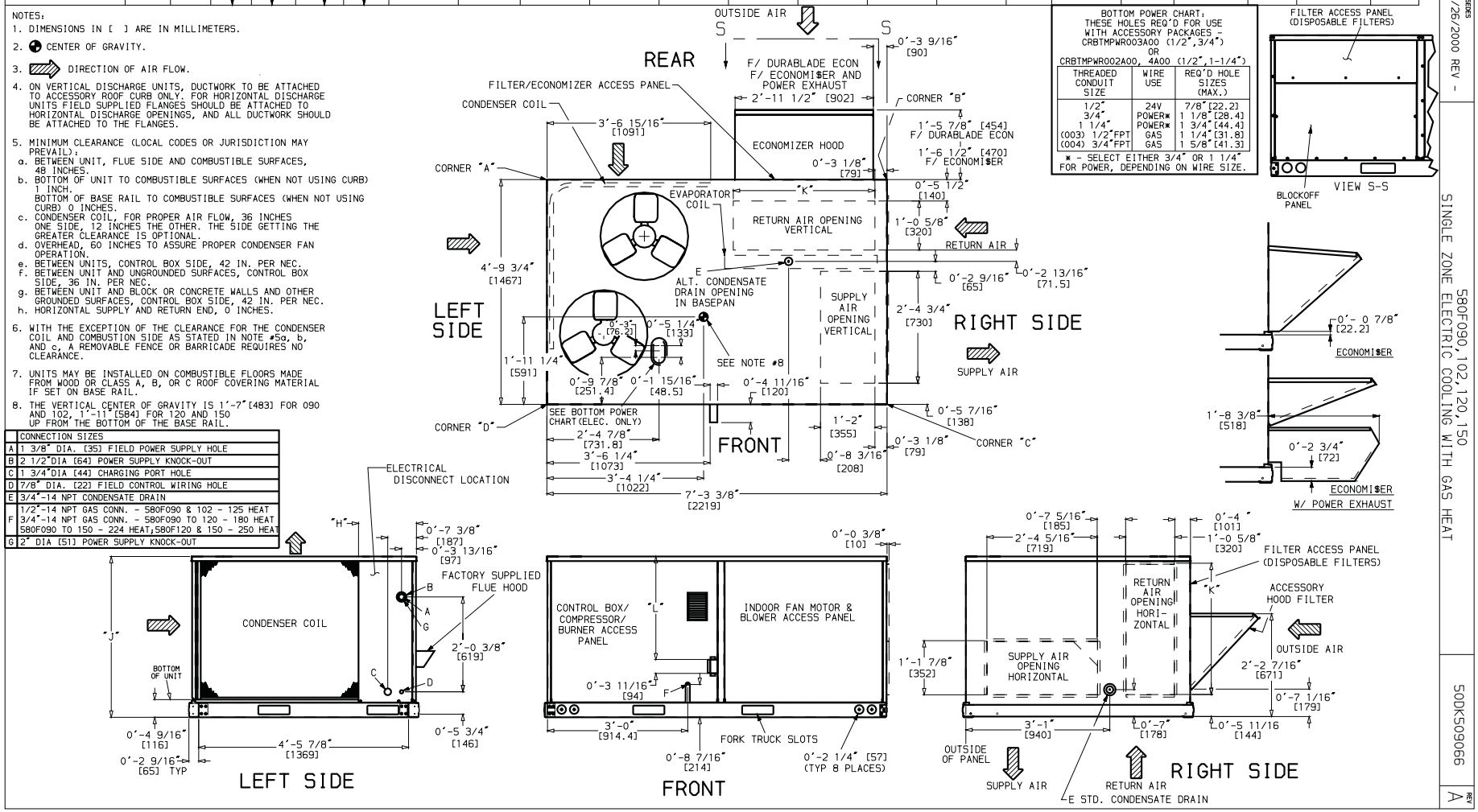

DATE 09/26/2001

SUPERSEDES 7/26/2000 REV -

580F090,102,120,150 SINGLE ZONE ELECTRIC COOLING WITH GAS HEAT

50DK509066 REV A

CERTIFIED DIMENSION PRINT

UNITED TECHNOLOGIES CARRIER
P O BOX 4808
SYRACUSE N. Y.
13221

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581B090/580F091	870	395	44	20	62	28	189	86	161	73	239	109	280	127	2'-0 7/8"	632	3'-5 5/16"	1050	2'-9 11/16"	856	2'-2 7/16"	672
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581B120/580F121	1035	469	↓	↓	↓	↓	225	102	192	87	285	129	333	151	1' -2 7/8"	378	4'-1 5/16"	1253	3'-0 3/8"	924	2'-10 7/16"	875
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   e. BETWEEN UNITS, CONTROL BOX SIDE, 42 IN. PER NEC.
   f. BETWEEN UNIT AND UNGROUNDED SURFACES, CONTROL BOX SIDE, 36 IN. PER NEC.
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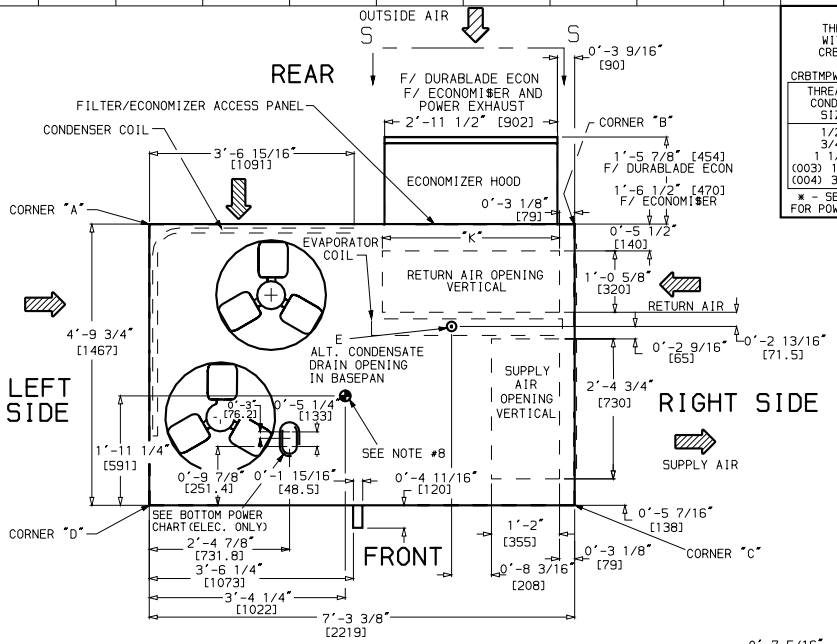
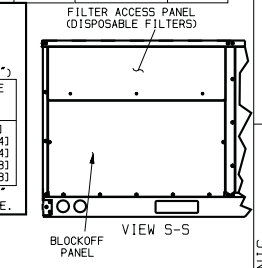
	CONNECTION SIZES
A	1 3/8" DIA. [35] FIELD POWER SUPPLY HOLE
B	2 1/2" DIA [64] POWER SUPPLY KNOCK-OUT
C	1 3/4" DIA [44] CHARGING PORT HOLE
D	7/8" DIA. [22] FIELD CONTROL WIRING HOLE
E	3/4"-14 NPT CONDENSATE DRAIN
F	1/2"-14 NPT GAS CONN. - 581B090 & 102 - 125 HEAT 580F091 - 125 HEAT 3/4"-14 NPT GAS CONN. - 581B090 TO 120 - 180 HEAT 581B090 TO 150 - 224 HEAT;581B120 & 150 - 250 HEAT 580F091 - 180,224 HEAT; 580F121 - 180,224,250 HEAT
G	2" DIA [51] POWER SUPPLY KNOCK-OUT

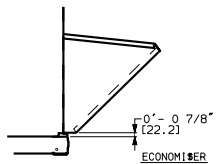
BOTTOM POWER CHART:
THESE HOLES REQ'D FOR USE WITH ACCESSORY PACKAGES - CRBTMPWR003A00 (1/2",3/4") OR CRBTMPWR002A00, 4A00 (1/2",1-1/4")

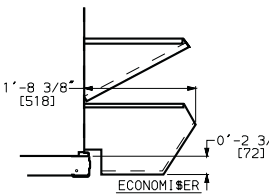
THREADED CONDUIT SIZE	WIRE USE	REQ'D HOLE SIZES (MAX.)
1/2"	24V	7/8" [22.2]
3/4"	POWER*	1 1/8" [28.4]
1 1/4"	POWER*	1 3/4" [44.4]
(003) 1/2"FPT	GAS	1 1/4" [31.8]
(004) 3/4"FPT	GAS	1 5/8" [41.3]

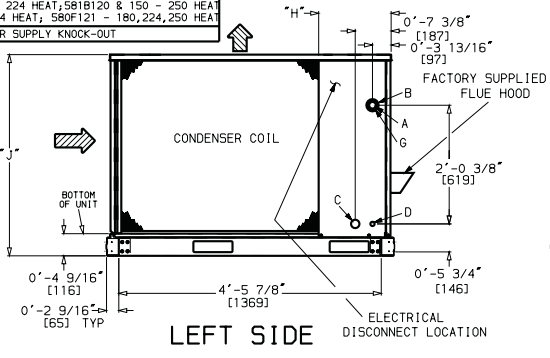
* - SELECT EITHER 3/4" OR 1 1/4" FOR POWER, DEPENDING ON WIRE SIZE.

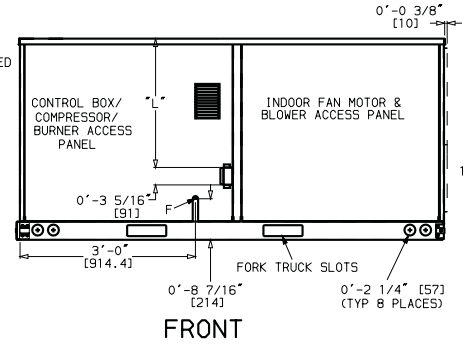


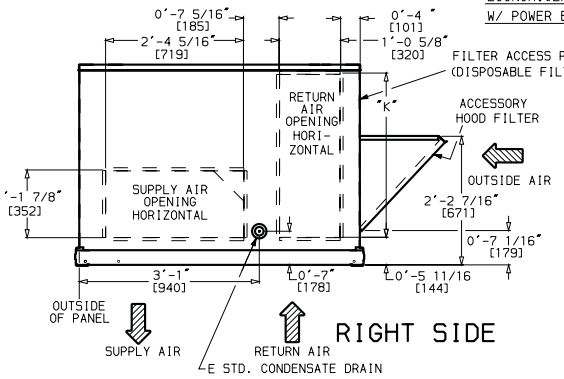












DATE 02/01/02
SUPERSEDES 11/01/01 REF G
581B090,102,120,150; 580F091, 121
SINGLE ZONE ELECTRIC COOLING WITH GAS HEAT
50HJ501011
REF H

CUT ALONG DOTTED LINE CUT ALONG DOTTED LINE

CERTIFIED ROOF CURB DIMENSION PRINT

UNITED TECHNOLOGIES CARRIER — P O BOX 4808 SYRACUSE N. Y. 13221

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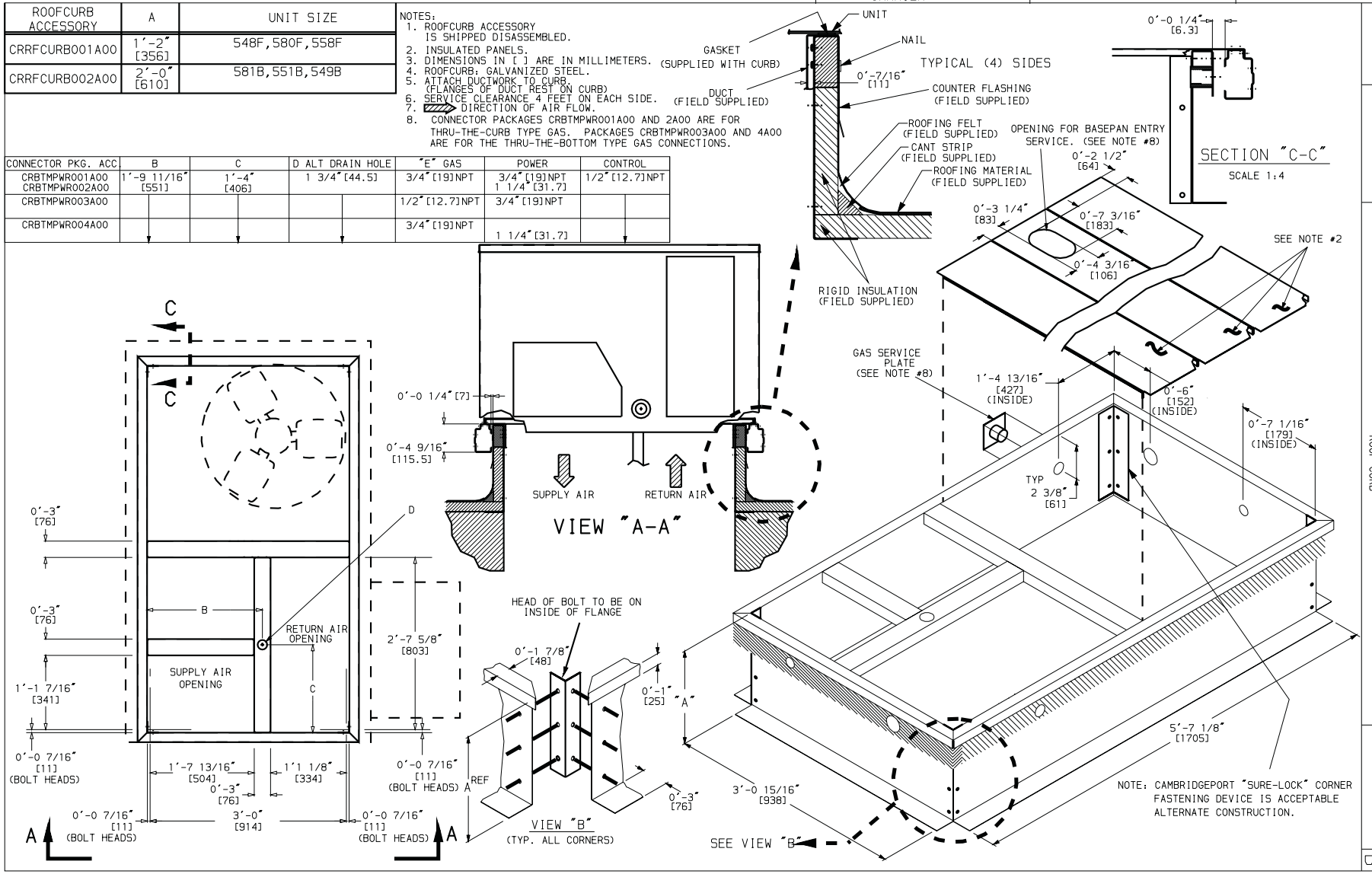
DATE 02/01/02 — SUPERSEDES 10/09/00 REV A — 548F,580F,558F,581B,551B,549B (036-073) ROOF CURB — 50DK509075 — REV B

ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB001A00	1'-2" [356]	548F,580F,558F
CRRFCURB002A00	2'-0" [610]	581B,551B,549B

NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS.
3. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
4. ROOFCURB: GALVANIZED STEEL.
5. ATTACH DUCTWORK TO CURB (FLANGES OF DUCT REST ON CURB)
6. SERVICE CLEARANCE 4 FEET ON EACH SIDE.
7. ▨ DIRECTION OF AIR FLOW.
8. CONNECTOR PACKAGES CRBTMPWR001A00 AND 2A00 ARE FOR THRU-THE-CURB TYPE GAS. PACKAGES CRBTMPWR003A00 AND 4A00 ARE FOR THE THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

CONNECTOR PKG. ACC	B	C	D ALT DRAIN HOLE	"E" GAS	POWER	CONTROL
CRBTMPWR001A00 CRBTMPWR002A00	1'-9 11/16" [551]	1'-4" [406]	1 3/4" [44.5]	3/4" [19] NPT	3/4" [19] NPT 1 1/4" [31.7]	1/2" [12.7] NPT
CRBTMPWR003A00				1/2" [12.7] NPT	3/4" [19] NPT	
CRBTMPWR004A00				3/4" [19] NPT	1 1/4" [31.7]	



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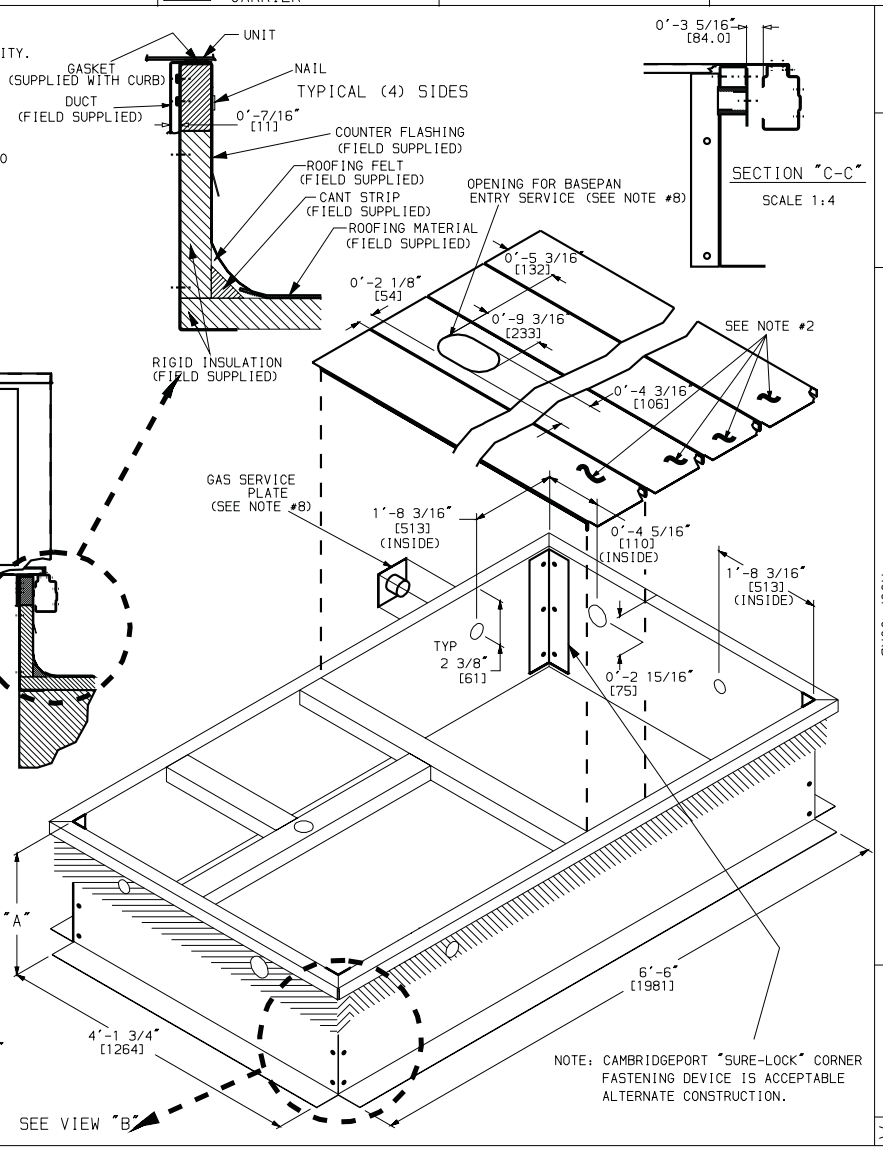
ROOFCURB ACCESSORY	A	UNIT SIZE
CRRFCURB003A00	1'-2" [356]	548F,580F,558F
CRRFCURB004A00	2'-0" [610]	581B,551B,549B (090-150)

NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. INSULATED PANELS: 1" THK. POLYURETHANE FOAM, 1-3/4 # DENSITY.
3. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
4. ROOFCURB: 16 GAGE STEEL.
5. ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB)
6. SERVICE CLEARANCE 4' ON EACH SIDE.
7. ▨ DIRECTION OF AIR FLOW.
8. CONNECTOR PACKAGES CRBTMPWR001A00 AND 2A00 ARE FOR THRU-THE-CURB GAS TYPE. PACKAGES CRBTMPWR003A00 AND 4A00 ARE FOR THE THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

CONNECTOR PKG. ACC.	B	C	D ALT DRAIN HOLE	GAS	POWER	CONTROL
CRBTMPWR001A00 CRBTMPWR002A00	2'-8 7/16" [827]	1'-10 15/16" [583]	1 3/4" [44.5]	3/4" [19] NPT	3/4" [19] NPT 1 1/4" [31.7]	1/2" [12.7] NPT
CRBTMPWR003A00	↓	↓	↓	1/2" [12.7] NPT	3/4" [19] NPT	↓
CRBTMPWR004A00	↓	↓	↓	3/4" [19] NPT	1 1/4" [31.7]	↓



DATE	SUPERSEDES			REV
10/9/2000	7/26/2000 REV -	548F,580F,558F,581B,551B,549B (090-150) ROOF CURB	50DK509076	A

Performance Data Certified by _____

FORM NO. SUB 580F:36.2 SUPERSEDES SUB 580F:36.1 2-02 (5158-002)